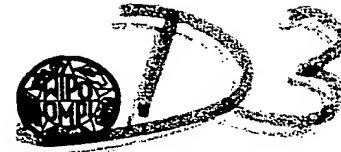


PCTWORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : C12Q 1/68, G06F	A1	(11) International Publication Number: WO 99/58720 (43) International Publication Date: 18 November 1999 (18.11.99)
(21) International Application Number: PCT/US99/10387 (22) International Filing Date: 11 May 1999 (11.05.99) (30) Priority Data: 09/076,668 12 May 1998 (12.05.98) US 09/292,657 15 April 1999 (15.04.99) US (71) Applicant: ACACIA BIOSCIENCES, INC. [US/US]; 12040 115th Avenue N.E., Kirkland, WA 98034 (US). (72) Inventor: SCHERER, Stewart; 3938 Paseo Grande, Moraga, CA 94556 (US). (74) Agents: HALEY, James, F., Jr. et al.; Fish & Neave, 1251 Avenue of the Americas, New York, NY 10020 (US).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: QUANTITATIVE METHODS, SYSTEMS AND APPARATUSES FOR GENE EXPRESSION ANALYSIS (57) Abstract The present invention provides methods for quantifying the relatedness of a first and second gene expression profile and for ordering the relatedness of a plurality of gene expression profiles to a single preselected gene expression profile. The methods are demonstrated to be useful for quantifying the relatedness of environmental conditions upon a cell, such as the relatedness in effects of pharmaceutical agents upon a cell. The methods are also useful in quantifying the relatedness of a preselected environmental condition to a defined genetic mutation of a cell and for quantifying the relatedness of a plurality of genetic mutations. Also presented are systems and apparatuses for performing the subject methods. Further provided are quantitative methods, systems, and apparatuses for selecting informative subsets of genes for gene expression analysis.		